

The Commonwealth of Massachusetts

ANNUAL REPORT

OF THE

Commissioner of Agriculture

FOR THE

Year Ending November 30, 1933



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The Commonwealth of Massachusetts

DEPARTMENT OF AGRICULTURE

To the Honorable Senate and House of Representatives:—

In compliance with the provisions of Chapter 128 of the General Laws, I am herewith making my annual report for the year ending November 30, 1933, for the Department of Agriculture.

Respectfully submitted,

ARTHUR W. GILBERT, *Commissioner*.

PERSONNEL OF THE DEPARTMENT

COMMISSIONER OF AGRICULTURE—DR. ARTHUR W. GILBERT, BELMONT.

ADVISORY BOARD APPOINTED BY THE GOVERNOR AND COUNCIL

JAMES O'BRIEN, LEE, Term expires November 30, 1934.

JOHN T. GOGGIN, SEEKONK, Term expires November 30, 1934.

JOHN BURSLEY, BARNSTABLE (WEST), Term expires November 30, 1935.

STUART L. LITTLE, NEWBURY, Term expires November 30, 1935.

WILLIAM CASEY, SPENCER, Term expires November 30, 1936.

GEORGE E. TAYLOR, SHELBURNE, Term expires November 30, 1936.

DIVISIONS AND ORGANIZATIONS

DAIRYING AND ANIMAL HUSBANDRY—*Director*, JOSEPH C. CORT, READING.

MARKETS—*Director*, LAURENCE A. BEVAN, NEWTONVILLE.

PLANT PEST CONTROL—*Director*, R. HAROLD ALLEN, TAUNTON; *Assistant Director*, QUINCY S. LOWRY, CANTON.

RECLAMATION, SOIL SURVEY AND FAIRS—*Director*, L. B. BOSTON, AUBURNDALE; *Assistant Director*, A. W. LOMBARD, ARLINGTON.

AGRICULTURIST—DANIEL J. CURRAN, MARLBOROUGH.

STATE RECLAMATION BOARD

Chairman, EDWARD WRIGHT, DEDHAM

GEN. RICHARD K. HALE, BROOKLINE

L. B. BOSTON, AUBURNDALE

Secretary, GEORGE R. STRATTON, HOPKINTON

REPORT OF THE COMMISSIONER

There existed, during the past year, a tremendous disparity between the prices that the farmer received for his produce and the prices that the farmer paid for the goods that he purchased. Farm commodity prices dropped steadily until they reached a point approximately 50 per cent below the pre-war level, whereas, in 1928 they averaged nearly 50 per cent above. The prices that the farmer paid for other goods dropped to a certain extent also, but in most cases, not below the pre-war level. It is evident that the purchasing power of the farmer has been materially decreased, and until that purchasing power is increased relatively to a pre-war level, the general return of prosperity will be handicapped.

Farm products in great volume continue to be shipped into our Massachusetts markets from other states long before the native products are available for sale and distribution. When the native products are ready for market, the price to the consumer has reached such a low level that it is difficult for the local farmer to market his farm product at a price that would yield any return above the cost of production, and it has happened in a great many cases during the past year that the Massachusetts farmer has been obliged to sell farm products at a price that is less than the cost of production. Every effort is being made to put into operation the most economical methods of production, in order to compete with the shipped-in products from every section of the United States.

In spite of their nearness to market, our market gardeners have been obliged to take rather severe losses in the marketing of their farm products, and while the

fruit growers found some little financial relief during 1933, the prices that they received for their apples did not provide a very ample leeway to take care of increased costs for equipment, materials and labor in caring for the fruit crop.

The strawberry growers have had very disastrous years during the depression when they found it necessary to sell their berries at unusually low prices following the influx of a tremendous volume of strawberries from the southern and southwestern states. Our poultrymen have found it rather impossible to make much progress in the way of securing a higher price for their eggs and dressed poultry. These men were in a position to carry on, by the practice of strict economy, when the prices of grain were relatively low, but the problem of maintaining a poultry farm with the prices of grain steadily rising is a most difficult one. The cost of labor and equipment has increased for all farm enterprises, and the prices for farm products have not increased to a level that will compensate the additional costs of production.

The dairy farmer has continued under most trying conditions to produce quality milk for our local markets. The Milk Regulation Board and local boards of health have insisted upon strict compliance with rules, regulations and inspection requirements pertaining to the dairy farm, and in many cases, the dairy farmer has been obliged to incur additional expenses for repairs and alterations that could not be paid out of the milk check. In many cases, it became necessary for dairy farmers to decrease the number of milking cows, and thereby decrease production in order that the financial loss might be proportionately less.

This Department has emphasized the importance of producing quality farm products to meet the competition of shipped-in products from other states. We have attempted to encourage in every way the use of the New England label to identify a fresh quality farm product from our local farms; and through the inspection of roadside stands, we have attempted to provide proper facilities for handling these native farm products under strict requirements for cleanliness, sanitation, location and display. Roadside markets that are able to comply with our requirements are furnished an attractive roadside sign under a lease agreement. This Department has also assisted in the organization of groups of producers into cooperative organizations, in order that their overhead cost might be decreased and that these producers might work together more economically in the production, sale and distribution of their farm products. Every possible assistance is being accorded the producer, during these trying years, to meet competition from other production areas and to carry on their agricultural enterprises which constitute a most important basic industry in this Commonwealth.

Numerous conferences and meetings have been held in the past year to formulate plans and obtain a definite understanding relating to the provisions of the milk control bill that would bring about some relief to dairy farmers. These conferences and meetings have resulted in uniting the dairy farmers on a common program, and we have gone ahead at the request of the Massachusetts State Dairymen's Association to draft a milk control bill that will provide for:

1. The appointment by the Governor, with the advice and consent of the council, of a Milk Control Board.

2. The vesting of power in this board to investigate all phases of the milk industry and to regulate the production, sale and distribution of milk.

3. The appointment of a milk administrator and such technical assistants and clerks as may be necessary to administer the milk control act.

4. The licensing of all milk dealers with power in the board to exempt certain stores and producer-distributors when such exemption does not adversely affect market conditions.

5. The fixing of the price to the producer for his milk.

6. The fixing of a resale price for milk sold to the consumer.

7. The "lost leader" clause to prevent the sale of milk at a price less than the cost of such milk, plus all handling charges.

8. A guarantee to members of cooperative dairy associations for payment of milk on the basis of the price fixed by the board.

9. The exercise of the police power of the Commonwealth in requiring all milk dealers to pay the price fixed by the board for all milk purchased outside of the Commonwealth.

10. The operation of this law as emergency legislation to continue so long as the Governor felt that the emergency existed.

This Department will endeavor to bring to the attention of the legislature the advantages that will accrue to the dairy farmer under the provisions of this milk control act, and it is expected that all agricultural organizations will unite in furthering the passage of this legislation.

During the closing months of 1933, the Federal government put into operation a milk marketing license and agreement in the Boston area that included in addition to suburban Boston cities and towns on the north shore as far as Gloucester and along the south shore including the Cape. This code attempted to fix the price paid to the producer for his milk and to fix the prices which the consumer paid for milk in its various grades and classes. There was considerable dissatisfaction in the practical operation of this marketing license and agreement, in view of the fact that many of our local dairy farmers had never received any surplus price for milk and were unwilling to equalize sales with shipped-in milk from the northern states. The protest from the local farmers was so vigorous that the first marketing agreement and license was cancelled by the Federal government and all parties at interest were invited to attend a hearing to ascertain the causes that affected adversely the successful operation of the license, and to adjust, if possible, the differences in the market, so that a new marketing agreement and license might be forthcoming.

During the last few months of 1933, several important projects were started under the supervision of this Department, for the relief of the unemployed and Federal funds approximating \$1,000,000 were used for this purpose and the expenditure of these funds was administered by a State board. The following projects had an important relation to agriculture and were supervised by the Department of Agriculture:

- | | |
|--------------------------------|------------------------------------|
| 1. Sanitary milk project | 4. White pine blister rust project |
| 2. Apple pest control project | 5. Fire protection project |
| 3. European corn borer project | 6. Knitting project |
| 7. Mosquito control project | |

The sanitary milk production project gave employment to approximately nine hundred men for a period of five months and the work consisted of cleaning, disinfecting and white-washing cow barns and advising dairy farmers in proper and inexpensive methods of producing milk under sanitary conditions. This project brought about a much needed relief to dairy farmers who had been receiving such a low price for their milk during a considerable period of time that it was a financial impossibility for them to hire help for this purpose.

Our inspection program required that the barns be cleaned and disinfected and the opportunity to provide a thorough cleaning with Federal funds assisted in no small measure to the successful accomplishment of our inspection program. Out of a possible 355 cities and towns, 322 were visited, and work was done on 8,615 dairy farms with a cow population of 93,306. The total cost of labor, trucking, materials and other costs was \$263,064.

Under the Apple Pest Control project, work was done in 296 cities and towns and 1,725 persons were employed at a total expenditure of \$392,837 for labor and materials. The objects to be accomplished under this project were the cutting down of old apple trees and cleaning up of such other trees and under-brush that were infested or likely to be infested with insect pests and diseases. The apple trees that were cut down were commercially valueless as fruit trees, and in most cases, were positively a menace to neighboring commercial orchards. About half of the trees cut down were wild cherry trees that were infested with insects. Fifty per cent of the commercial orchards in the Commonwealth were cleaned up and protected under this project and approximately fifteen per cent of the smaller orchards. Due to the closing down of this type of Federal relief project all of the commercial orchards could not be properly protected, but the entire project received

such favorable commendations that it is hoped that some way will be provided for the continuance of this insect and disease eradication program. Most of the work to be done was accomplished on private property and releases were obtained from the owners to permit the employees to enter upon the owners' premises and to release the government and State from liability for damage.

One hundred and seventy-six cities and towns were visited under the European Corn Borer project and 516 persons were employed with a total expenditure of slightly more than \$80,000. The work involved under this project consisted of digging up the corn stubble and standing stalks and disposing of such stubble and stalks by burning. The sections of the State where the corn borer has done the greatest damage were selected as the territory within which to carry on this work, and it is expected that the work accomplished will assist to a great extent in furthering the control of the corn borer which the Department has fostered for the past fifteen years.

Under the White Pine Blister Rust project 43 towns were visited in infested areas and 136 men were employed at a total expenditure of approximately \$30,000. More than 4,000 acres of pine trees were examined and approximately 18,000 stem-cankered trees were removed, and about 13,000 pines were treated for branch cankers. In the 174,701 places inspected for black currants, about 6,000 currant bushes were found. The work accomplished under this project was of considerable importance in the program of control work mapped out by the Department for white pine blister rust control.

Six hundred men were employed in the Fire Protection project which was carried on in 65 cities and towns of Plymouth, Bristol, Barnstable, Dukes and Nantucket counties. Four hundred and ninety-eight water holes were constructed which protect nearly 11,000 dwellings—that with forest lands are valued at \$40,000,000. The total cost of the project was \$115,279.16 and 99½ per cent of this amount went to labor, as tools and equipment, for the most part, were furnished by the various communities where the work was being done. Before the project was completed more than \$210,000 worth of property is known to have been saved by the use of these water holes by local fire departments.

The State Knitting project which was administered by the Department was organized through the County Extension Services and gave employment to 1,090 women. There were 75 separate knitting groups organized and every county in the State with the exception of the Island counties was represented. The project cost \$202,075.26 and the value of the materials made was appraised at \$104,615. The knitted articles were turned over to the various welfare boards for distribution to the needy.

Through the State Reclamation Board there were several mosquito control projects, part as regular CWA projects and part Federal projects. In all 1,038 men were employed. The amount of money spent was \$151,796.41 and was furnished by the State Civil Works Administration, the Commonwealth of Massachusetts and the U. S. Department of Agriculture. A more detailed account of this project is recorded under the report of the State Reclamation Board found in another section of this bulletin.

All of the relief work accomplished under these Civil Works projects will react to the benefit of Massachusetts agriculture, and many of the persons employed were farmers who were having considerable difficulty in carrying on their farm enterprises under the circumstances that the depression had brought about. The work was widespread and had a definite educational value, in that the persons employed under the different projects contacted many persons who had not previously been reached by Department representatives. The entire program was carried out with a measure of efficiency and effectiveness that bespeaks a seriousness of purpose and a conscientious effort of each person employed either in a supervisory or laboring capacity.

MASSACHUSETTS FARMS FOR SALE

For more than fifty years the Massachusetts Department of Agriculture has listed farms for sale in this Commonwealth. This publication has been the means of finding buyers from all over the United States to purchase our farms which for one reason or another are offered for sale. This list has been particularly valuable

during the past two or three years when there has been a considerable movement of population from other areas to this State. Since the World War the price of western land and the cost of producing farm products there has been so inflated that many good farmers have found it necessary to sell out their properties and go elsewhere. Some of these have come East to buy our farms which are much nearer markets, and offer in many instances a greater opportunity for success than the lands which they have left.

There is a definite tendency for decentralization of our industrial population in Massachusetts. Many persons living in urban centers have sold or rented their properties and moved into the suburbs, where they find it possible partially to maintain themselves and their families by raising a limited amount of food in their own back yards. This movement has called for an unusual demand for the location of properties which are for sale, and many of them have changed hands during the last five or ten years.

The properties which change hands quickest are, of course, the smaller and less expensive ones, but our records would indicate that a considerable number of large farms have also been sold through the medium of this bulletin.

FARM LABOR

Farm labor activities in this Department have been little called for during the past year because unemployment has provided ample labor for farmers in their own localities. A large number of persons have applied to the Department for work, but it has been very difficult to place them in positions because of this abundance of local labor. The price of labor has dropped very noticeably, first, because of the inability of the farmer to pay the customary higher wages; and second, the desirability of the former to work at any price which may be secured. However, some employers have succeeded in procuring excellent managers and other assistance through us, as usual.

SUMMER VACATIONS

This Department has continued to publish its bulletin "Vacation in the Country," which lists farm homes which are available for summer vacations for people living in urban centers. This bulletin has been in greater demand than ever. During this depression, a considerable number of persons have found it impossible, because of the cost, to spend their vacations on the sea shore and at other similar resorts. They have, therefore, turned to farm homes. Here they have found increasingly good facilities, to the extent, apparently, that many of them have decided that the greatest satisfaction for a real summer vacation can be secured in the country where fresh food is abundant and opportunities for recreation and rest are always present.

The increased use of our excellent highways has also stimulated the development of overnight facilities by farmers who live along these roads.

Through the helpfulness of this Department, the Massachusetts State College and other agencies, as well as the impetus of the owners themselves, there has been a marked tendency to improve these country facilities during the last two or three years. They have been modernized, made more sanitary and attractive.

This bulletin has been sent to thousands of persons in various parts of the country, particularly in the cities of the East. Many school teachers have taken advantage of information contained in it to procure a suitable place for a summer vacation. Families with children have found farm homes to be well adapted to their requirements.

Several talks over the radio have tended to increase interest in this type of summer vacation, and have resulted in an increased number of inquiries to this Department concerning it. We believe that the use of farm homes for city dwellers has great possibilities in this Commonwealth.

AWARDS RECOMMENDED FOR AGRICULTURAL ACHIEVEMENT

The following were recommended for special recognition at the time of the Union Agricultural Meeting in Worcester to be held on January 4, 1934:

John G. Ellis, Lee, For the Improvement of Animal Husbandry.

Edward Dwyer, Weymouth, For Creditable Accomplishments in Dairying.

Clarice Jones, Stoneham, For Accomplishments in 4-H Club Work.

Chester Pilch, Feeding Hills, For Accomplishments in 4-H Club Work.

REGULATORY WORK OF THE DEPARTMENT

The result of an intensive education program coupled with numerous hearings on violations of agricultural laws and some necessary prosecutions appear to have brought about a satisfactory situation insofar as the enforcement of our agricultural laws is concerned.

The Apple Grading Law

The optional provisions of our Massachusetts Apple Grading Law, which was amended two years ago, and now permits the fruit farmer to pack apples in closed containers without a grade mark, has had a tendency to relieve the burdensome aspects of the old compulsory grading and packing law. If the fruit farmer voluntarily packs apples under an official grade, it is naturally expected that he will comply fully with the provisions of such grade, and our experience rather indicates that this compliance is forthcoming. Fruit growers have practised in general a thorough system of spraying that has resulted in cleaner fruit, and we have found that in consequence of this general improvement in the production of apples there is less overfacing on the market. The instances of our inspectors finding packages of apples that were overfaced, and wherein the top layer did not represent the contents, have become much less frequent than in other years. Our prosecutions of violations of the Apple Grading Law during the past year have been practically negligible, due to the cooperation that we have received from the fruit growers and others in the grading, packing and marketing of their apples.

Corn Borer Control

It has been the policy of the Department of Agriculture, during the past several years, to hold hearings on corn borer violations and acquaint the violator with the provisions of the law and the damaging results of corn borer infestations, and further instruct all parties concerned with the control measures that must be practised under the law. This policy has worked to good advantage and there have been very few repetitions of neglect or failure to comply with the law. All second violations have been prosecuted in the courts. A corn borer control project was established under the Civil Works Administration of the federal government, and this project had for its objective the digging up and destruction of corn stubble and corn stalks. More than 500 persons were employed in 176 cities and towns for the purpose of destroying all corn stubble or stalks that could be located. This project started in November and the regular inspectors were not employed as usual to report violations of the corn borer law in the territory that had been assigned to them. Many persons were contacted under the federal program and the destructive influence of the corn borer brought to their attention, and it is expected that the educational aspects of the corn borer control project will be of considerable regulatory value.

The Seed Law

Five hundred and seven official seed samples were collected and submitted to the seed laboratory at Amherst, Massachusetts. These seed samples were tested and analyzed and an official bulletin was issued by the Massachusetts Agricultural Experiment Station with a complete statement of the findings of the seed analyst.

The official seed samples submitted would indicate that a better quality of seed was sold on our Massachusetts markets. There is, however, room for improvement in several respects. The seed law is in effect a labeling law and requires certain definite information on the label that is attached to each container of agricultural seed. It has been impossible in some cases for the inspectors to obtain adequate information, because the labels on the seed container were lacking in required information. Vegetable seeds in general were labeled in accordance with the provisions of the law, but the per cent of germination as determined by the seed laboratory, indicated in many cases, a germination that was much too low to insure a satisfactory crop for the farmer.

Our seed dealers should insist upon adequate information on the label and should insist upon a vegetable seed of high germinating qualities. The farmer is burdened with the expense of the same preparation of the soil and the same amount of fer-

tilizer and spray material for poor seed as well as good seed, and it has been the purpose of this department to call to the attention of the seed dealer that he should furnish the purchaser with the quality of seed that will reasonably guarantee a satisfactory crop.

It will be the policy of the department to hold official hearings on violations that appear of record from the seed testing laboratory and definitely instruct the dealer regarding the provisions of the seed law and the way that the law should operate. A second violation by the seed dealer of any provision of the seed law will necessitate that case being brought to the attention of the courts.

REPORT OF THE DIVISION OF DAIRYING AND ANIMAL HUSBANDRY

MILK REGULATION BOARD

By authority granted the Milk Regulation Board in 1932, the following regulations for the inspection of dairy farms producing milk for distribution, sale or exchange in the Commonwealth were established:

1. *Employees*.—No person having a communicable disease listed below or who shall care for any person having any such disease shall handle milk or milk utensils. No dealer or distributor shall knowingly sell or distribute milk shipped from a dairy farm where there is a case of such communicable disease.*
2. *Cows*.—All diseased cows shall be removed from the milking herd. No producer shall sell milk obtained from any diseased animals.
3. *Dairy Barn*.—The construction and maintenance of the place where milking cows are kept shall be based upon the following items:
 - (a) Adequate light shall be provided. Windows shall be kept clean.
 - (b) Sufficient ventilation shall be provided.
 - (c) The floor and gutters shall be tight, clean and in good repair.
 - (d) Walls and ceiling shall be tight, clean, and in good repair. They shall be whitewashed at least once a year, unless finished with a surface that can be easily cleaned.
 - (e) Milk stools shall be kept clean and be stored in a clean place.
 - (f) All cow yards shall be kept reasonably clean and dry.
 - (g) All manure shall be removed or stored or disposed of so as to prevent the breeding of flies therein, or the access of cows thereto.
 - (h) No fowls or animals other than dairy cattle shall be kept in parts of the barn used for dairy purposes.
4. *Milking*.—The udders and teats of all milking cows shall be kept clean and the flanks, bellies and tails shall be free from manure and loose dirt at the time of milking. The hands of the milkers shall be washed clean immediately before milking and kept clean and dry during the process of milking.
5. *Milk House or Room*.—A properly constructed milk house or milk room shall be provided for the handling of milk and the storage of milk containers and utensils.
 - (a) The floor shall be tight and graded to provide proper drainage.
 - (b) The walls and ceiling shall be of such construction as to permit of easy cleaning.
 - (c) Sufficient light and ventilation shall be provided.
 - (d) It shall be kept in a sanitary condition and as free as possible from flies.
 - (e) The door shall not open directly into a place where milking cows or other animals are kept or into any room used for domestic purposes.
 - (f) A properly constructed cooling tank of sufficient size and depth, or other approved cooling facilities shall be provided in the milk house, milk room or other approved location.
 - (g) The cooling facilities shall be used for no other purposes than the cooling and storage of milk. They shall be protected from contamination and maintained in a sanitary condition.
 - (h) Non-rusting metal racks for the draining and storage of containers and other utensils shall be provided.

* Among the diseases known to be spread by milk are tuberculosis, typhoid fever, scarlet fever, diphtheria, septic sore throat, foot-and-mouth disease, dysentery and other intestinal infections.

6. *Straining and Cooling.*—Milk shall be strained in the milk house or milk room as soon as drawn from the cow. The cooling of milk shall begin immediately after straining. Within two hours, its temperature shall be 50 degrees Fahrenheit and maintained at that temperature until delivery or collection is made.
7. *Utensils.*—All containers and utensils used in the handling or storage of milk shall be made of metal or glass constructed so as to be easily washed and shall be in good repair. Joints and seams shall be soldered flush. Metal containers and utensils which are rusted on the inside surface shall not be used in the handling or storage of milk. Single service filter pads or strainer cloths shall be used.
8. *Care of Utensils.*—All containers and utensils used in the handling or storage of milk shall be washed and sterilized after each use, and stored so as to prevent contamination. The sterilizing may be done with boiling water, dry heat, live steam or sodium hypochlorite.
9. *Water Supply.*—The water supply shall be easily accessible, adequate, and of a safe, sanitary quality.
10. *Toilets.*—Every dairy farm shall be provided with a sanitary toilet or privy, properly located, well constructed and maintained in good condition.

Further authority was granted the Milk Regulation Board to establish rules and regulations for grades of milk. Two public hearings and one meeting were held with milk producers, milk inspectors and milk dealers to draw up a set of regulations establishing grades of milk. The act giving further authority to the Milk Regulation Board relative to grades of milk also repealed Sections 13, 14, 14a and 15 of Chapter 94, General Laws.

DAIRY FARM INSPECTION

On August 1, 1933, and under the direction of the Milk Regulation Board, six dairy farm inspectors were appointed and started farm inspections. Previous to starting work, the dairy farm inspectors were given a course of instructions, including a few days at the Massachusetts State College and also a few days actually inspecting farms under the supervision of Ernest T. Kelly of the Dairy Division, United States Department of Agriculture. Several meetings with local milk inspectors were also held and instructions given to both state and local inspectors relative to the use of the new score card and interpretation of the regulations.

The following is a summary of the farms which were inspected from August 1, to November 30, 1933:

	FIRST INSPECTIONS					REINSPECTIONS		
	Aug.	Sept.	Oct.	Nov.	Total	Oct.	Nov.	Total
Massachusetts.....	430	87	123	39	679	59	64	123
Maine.....	73	19	0	1	93	0	20	20
New Hampshire.....	188	88	38	13	327	0	1	1
Vermont.....	102	751	502	471	1,826	14	94	108
New York.....	17	235	60	0	312	0	132	132
					3,237			384

NOTE.—In addition to the inspection by state inspectors, 3,460 inspections were made by city and town inspectors, making a total of 7,081 inspections during this period.

CERTIFICATES OF REGISTRATION

The procedure for issuing certificates of registration is as follows:

1. Annual application for dairy farm registration, Form D-1 (9973) will be made on forms provided by the Director and shall contain certain information. This will require mailing thirty to forty thousand blanks during the year. Applications will be received, checked and filed by states and then alphabetically by towns and names. All producers not responding to notice of expiration within thirty days shall be sent a second or final notice, Form D-2. The name and address of the applicant will be placed in metal file directory by states and alphabetically. This file will give quick access to the producers who have applied for registration.
2. Inspection of dairy farms on score cards, Form D-3 (8609) will be made by department inspectors or by city and town inspectors that continue to do farm

- inspection. A copy of all score cards will be sent to this office. These score cards will be filed by states and alphabetically by towns and names. Each producer will have an individual folder containing his score card; in cases of reinspections, several score cards will be in the folder. This folder will also contain a carbon copy of the certificate, Form D-4 (9640), when issued.
3. When the application, Form D-1 (9973) and score card, Form D-3 (8609) are approved, a certificate, Form D-4 (9640) will be made out in duplicate, original mailed to producer and duplicate placed in producer's file. Applications, Form D-5, should be addressed and expiration date typed to be sent out four weeks in advance of expiration of certificate (1935). These addressed blank applications should be filed away according to date of expiration, which is June 30th, for farms located within the Commonwealth, or for farms outside the Commonwealth at a date determined by Milk Regulation Board.
 4. In the case of a producer's farm not being approved, reinspection will be made in sixty to ninety days. If approved at that time, the same procedure as in Paragraph 3 will be followed. If not approved on reinspection and the certificate is to be refused, suspended, or revoked for failure to comply to dairy farm regulations, a Notice of Hearing, Form D-5, must be sent to the producer. Thirty days after the hearing (1) Notice of Refusal, Form D-6, (2) Notice of Suspension, Form D-7, (3) Notice of Revocation, Form D-8, or (4) the issuance of a certificate, Form D-4 (9640), must be sent to the producer.
 5. A notice, Form D-9, must be sent to dealers and Boards of Health that certain producers cannot sell their milk if certificate is refused, suspended or revoked.
 6. On the application, Form D-1 (9973), the Director may ask for certain information: i.e., number of cows and heifers, amount of milk produced and sold, etc. These statistics will be compiled from time to time.
 7. In addition to the requirements on the annual application, Form D-1 (9973) the Director may request a complete statement of the producers' statistics including milk sales, milk production, number of cows and heifers, etc., for any month of the year and will be made out on Form D-10. Statistics such as can be compiled from these statements have never been available and will be valuable information to the dairy industry.

MILK QUALITY IMPROVEMENT WORK AND CHECK TESTING

Improving the quality of the milk produced on Massachusetts farms continues to be one of the problems of the division. The quality work was done as in the past by using the methylene-blue test and the sediment test. In cases where the tests showed poor quality, the inspectors have followed up the work by making visits to the farms and offering suggestions for correcting the causes of the poor milk.

Section 29-A of Chapter 94 of the General Laws was amended this year giving the department authority to determine whether or not the rules and regulations pertaining to the methods and frequency of making certain tests of milk and cream are being complied with. The following is a summary of this work:

Pasteurizing milk dealers	318	Producers interviewed	1,017
Raw milk dealers	223	Farms visited	402
Producer milk dealers	746	Butter fat tests made	1,998
Reductase tests made	2,650	Lactometer tests made	435
Sediment tests made	4,550	Total solids computed	129
Temperatures taken	1,727	Milk plants visited	490
Producers Milk tested	5,374		

Check testing was done at the following milk plants:

H. P. Hood & Sons	Shelburne Falls
F. B. Mallory	Springfield
H. P. Hood & Sons	"
General Ice Cream Corp.	"
United Dairy System	"
United Dairy System	Northampton
Brookside Dairy	"
Producers Dairy Co.	Brockton
H. F. Soderholm	West Bridgewater

Quality milk work was performed in the following towns and cities:

North Attleborough	Westminster*	Dartmouth
Taunton*	Leominster*	Wareham
Easthampton*	Gardner*	Gloucester*
Chicopee	Webster	Middleton
Southbridge	Dudley	Attleboro
Westfield	Reading	Greenfield*
Braintree	North Andover	Milford*
Brockton*	Methuen*	Mendon*
Stoneham	Lawrence	Rockport
Wakefield	Clinton	Essex
E. Bridgewater	Berlin	Ipswich
W. Bridgewater	Newburyport*	Amesbury
Marlborough	Newbury*	Haverhill
Hudson	W. Newbury*	Athol
Pittsfield	Salisbury	Orange
Fitchburg*	New Bedford	Northampton
Lunenburg	Fairhaven	

*Towns worked in more than once.

The results of the reductase test were as follows:

	%
Class 1. (Excellent)	1,832 = 64.6
2. (Good)	596 = 21.
3. (Poor)	278 = 9.9
4. (Very poor)	129 = 4.5
	<hr/>
	2,835 100%

BONDING LAW AND FINANCIAL REPORTS

The law requiring milk dealers to submit a financial report was repealed, and a section covering a bonding law was inserted in its place. Preliminary work under the bonding law was started but will not become effective until March 1, 1934.

MILK MARKETING AND SURVEYS

The division assisted in organizing the Milk Dealers' Association in Chicopee and the local Dairymen's Association of Hampden and Hampshire counties, and in the stabilization of milk prices in Chicopee, Springfield, and Holyoke. A milk consumption survey was made in the city of Springfield.

OLEOMARGARINE

Due to the low price of butter, oleomargarine is not being offered for sale in many stores. Very little of this type of inspection work has been done. A total of 650 stores and restaurants was inspected.

HORSES

The increased interest in horses still continues and the usual assistance was given in conducting the dynamometer horse pulling contest at the Eastern States Exposition at Springfield. The Boston Horse Show, in which a good deal of interest in commercial horses is usually shown, was not held this year due to the depression.

SHEEP

Wool, amounting to 25,000 pounds, was collected to be made into virgin wool blankets, netting 248 farmers considerably more than the market price of wool. Assistance was given to farmers in buying and selling over 300 sheep and also in disposing of over 350 lambs, mostly for the Easter market.

POULTRY

Record of Performance.—For this year the grade known as "Massachusetts Record of Performance Accredited" was carried on with very good results. There were sixteen poultry plants under the supervision of the division, and unannounced

visits to these plants were made, taking over the trap nesting work for the day and checking the trap sheets for accuracy. For the coming year, applications have been received from twenty breeders, showing an increased interest in the work.

At various times throughout the year, articles were written for magazines and Sunday papers, giving the meaning of R. O. P. work in this state, the results our R. O. P. breeders had in comparison with other states and the splendid record our R. O. P. breeders made at egg laying contests. Every Massachusetts R. O. P. breeder who entered birds in egg laying contests throughout the country made a record to be proud of.

On the work that this division supervised, there were 5,717 birds entered which were trap nested and records kept on, and of this number 1,862 met the grade requirements by laying at least 200 eggs in 365 consecutive days which averaged to weigh at least 24 ounces per dozen from February 1st to September 1st.

All birds entered for R. O. P. inspection must first meet the certification requirements.

Certification.—For the past year under the “Massachusetts Certified Accredited” grade there were 36 poultry breeders under our supervision with a total of 42,311 birds inspected.

Each bird was inspected and legbanded, providing it met the grade requirements for Pullorum disease freedom, health and vigor, productive capacity and reasonable freedom from standard disqualifications.

During the hatching season two visits were made to check on the size of all hatching eggs set and to make sure that the grade requirements were lived up to by the various breeders.

Miscellaneous.—During the year the department was called upon to assist the poultrymen of the state with many problems. Some of the matters in which assistance was given are as follows:

1. Preparing fresh egg and poultry thieving laws.
2. Establishing a New England Export Association to promote the sale of breeding stock in other countries.
3. Preparing and explaining a proposed Breeder-Hatching Code.
4. Interviewing some poultrymen who were advertising falsely.
5. Control of infectious Laryngotracheitis Vaccine in this state.
6. Started the plans for a Pullorum Accredited grade of poultry.

REPORT OF THE DIVISION OF MARKETS

Activities of the Division of Markets during the past year have included numerous emergency measures in addition to the regular service and promotional work.

Prominent in this respect has been the increased amount of shipping point inspection of apples resulting from the fact that our state apple crop was larger than usual while many of the middle western states experienced comparative shortages.

Shipments of Massachusetts apples to the middle west were the largest on record. The corresponding increase in the demand for shipping point inspection and certification made it necessary to expand this service to handle not only a larger volume of apples, but also to cover a greater number of producing areas.

The temporary establishment of the Civil Works Administration provided a fine opportunity for the furtherance of the apple maggot control program. Several control projects covering the entire state, but concentrating on the principal fruit growing regions, were set up under the supervision of this division. Fact finding work carried on by the division over the past four years was used as a basis for the conduct of the Civil Works projects.

Encouragement of increased consumer use of native products has featured the retail market news service. Radio talks, news articles, charts and other material of similar nature have been used in this work of bringing to the attention of consumers timely information regarding the availability of locally produced food supplies.

The regular services, including market news, standardization of grades, inspection work, etc., have been maintained on regular seasonal schedules.

MARKET NEWS SERVICE

Reports on Farmers' Produce Markets in Boston, Worcester, and Springfield have been continued daily throughout the year.

A Special Apple Market Report has been issued regularly during the apple season. Extra reports were published during the height of the apple movement in order to keep growers in timely touch with market developments. An important addition was made to this service during the past year in the form of monthly reports on cold storage holdings of apples in country towns. Heretofore the cold storage information has been confined to the large city warehouses. The rapid growth of country cold storage facilities, however, has placed this phase of the industry in a highly important position, resulting in a need for timely information as to the volume of apples stored outside of the large city markets. This need has been met by a monthly publication of reports from country points.

RETAIL MARKET REPORTS

The Boston Retail Price Report has been issued regularly the first Tuesday of each month. The report, headed by a market news paragraph directing attention to native products available in market and particularly plentiful or low priced products, gives the range of commonly prevailing retail prices on fruits, vegetables, meats, fish and dairy products. Besides use in statistical studies, the report is used by homemakers and others buying on a retail basis, and during the past few years has been used increasingly by welfare agencies preparing menu and budget guides. During the year the division took active part in outlining weekly market budgets and menus on a graduated cost basis.

SHIPPING POINT INSPECTION

Shipping point inspection of apples during the year has established a new record both as to amounts of apples inspected and scope of activity. This service which has been in operation for three years has heretofore been confined practically entirely to the inspection and certification of apples intended for shipment to export markets. This year, however, there has been an increasing demand for the use of inspection and certification of apples shipped to domestic markets from New York and large middle western cities.

Approximately 70,000 bushels of apples were inspected. Fees collected for the certificates and paid into the state treasury totalled about \$850.

This shipping point inspection service is carried on under a cooperative agreement with the United States Department of Agriculture. In addition to apples, a small number of inspections were also made on pears, with service available on onions and potatoes, but there is only a nominal demand for use on these latter commodities this season.

STRAWBERRIES

The strawberry inspection service at Falmouth carried on at the request of and under an agreement with the Falmouth Strawberry Growers' Cooperative Association was continued during the past year. Approximately 20,000 crates were inspected.

The cooperative movement among Falmouth strawberry growers is showing gratifying progress. The two active farmers' associations in that section have recently combined under one organization which will bring into the new association more than half the growers on the Cape and which is expected to result in an increase of more than 100 per cent in the output of graded and inspected strawberries.

APPLE GRADING LAW

Regular inspection work was carried on throughout the season at city markets, leading shipping points, and in cold storage warehouses. The past season's experience has given further evidence of proof that the revisions of the law as promulgated in 1931 are meeting the requirements of the industry.

APPLE MAGGOT

Apple maggot control during the last year centered largely around the development of maggot free areas in several of the important apple producing sections.

This work has been carried on in cooperation with the county extension services. In addition to this, inspectors of this department have examined numerous samples of apples for the purpose of assisting growers in checking up on the effect of control measures.

The apple maggot control program now in its fourth year of operation under a special legislative appropriation and having as its aim the control of this most serious apple pest, has seen partial fruition of its goal during the past year in the apple pest control program conducted by the Civil Works Administration under the supervision of this department.

The investigational work, the mapping of badly infested areas, and the other fact finding activities carried on by this department were used as a basis for the control program approved by the civil works board.

The elimination of neglected trees under the Civil Works project has been of great assistance in checking the spread of the maggot. However, large work yet remains to be done. The Civil Works project was carried on only with the permission of land owners. While in general the owners of land containing pest breeding trees were very cooperative, there were some instances where such land owners would not permit the removal of apple trees. The present seems a strategic time in which to capitalize on the favorable results of the Civil Works project by an intensive check up in the sections which were not completely covered. There is also considerable agitation among growers for more stringent compulsory spray legislation in order to control the spread of the maggot as well as some of our other apple insects and diseases.

STANDARDIZATION WORK

Egg inspection work was continued throughout the year under the Farm Products Grading Law. Records were kept of inspections made at both the Springfield Egg Auction and the Brockton Egg Auction. These reports were later analyzed for the purpose of checking or determining the practicability of the present state grades. This information was later presented to the directors of the Brockton Auction for discussion.

Educational material was collected and disseminated on the various methods of retaining egg quality. A bulletin was also compiled which included such information as was available on egg marketing, standards and grades, laws and regulations and other valuable data pertaining particularly to Massachusetts poultrymen.

The department also cooperated with the Farm Bureau, Egg and Poultry Committee, on egg and poultry legislation. Proposed Fresh Egg Laws and Poultry Selling and Transportation Laws were drafted.

Inspection work on turkeys was done during the Thanksgiving and Christmas marketing periods. Two special reports were issued on turkey market information, including Worcester, Springfield, and Boston. A turkey crop survey report, as well as a survey on distribution or method of sale was released.

Market information on asparagus was collected regularly throughout the season for analyses. This type of information has been gathered in years of high prices and low prices in order to determine the effect of certain quality factors on price.

Inspections of graded Massachusetts asparagus were made three nights a week. Inspections of graded strawberries were also made in season. In all inspection work it is the purpose of the department to promote improvements in methods of marketing. Suggestions for improvements are offered whenever possible. Any new information which is available is passed along to producers so as to keep them in touch with changes in methods which are taking place.

Roadside stands which carry a state shield were also inspected frequently. The purpose of this work is for the benefit of producers and consumers alike. These stands are inspected for cleanliness, quality of produce, and quality of display. Again all available information regarding new methods of marketing or advertising are offered.

FARM ROADSIDE MARKETS

The inspection service of farm roadside markets leasing the state sign was maintained throughout the season. A new metal sign of the same design but more durable than the original and with colors reversed—a background yellow and markings

blue—was displayed by 47 stands under the 1933 lease agreement. Users of the sign formed an association principally for advertising and publicity purposes and the group plans greater activity in the future.

STATISTICAL INFORMATION

Growing interest for information on Boston food supply, the principal sources, seasons and sources of competition for native produce is manifest in the increasing demands for the mimeographed annual bulletin "Receipts and Sources of Boston Food Supply." Requests for the publication represent varied interests including farmers, farmer organizations, marketmen, retail store concerns, homemakers, research workers, economists, transportation agencies, students, teachers and welfare agencies. "Receipts and Sources of Boston Food Supply" is a compilation and tabulation of amounts and sources of the principal foodstuffs coming to Boston. Terse, supplementary reviews relating to and explaining the situation of many of the products accompany the statistical data. Information gleaned from personal interviews and study and analysis of past records produces the information for these summaries. The publication presenting much detailed information in concise form, easy for reference, is used repeatedly in connection with department activities, such as fairs, farmer market plans, special market investigations, department talks and general publicity.

A complete, detailed summary of the weekly receipts and average prices of important locally produced vegetables sold in Boston market was prepared for the 1932-33 season as in previous years and published as a guide to market gardeners in planning their crop operations.

In connection with special investigations and studies conducted during the year and in response to requests for particular information much statistical information was tabulated, such as crop production, market receipts, retail and wholesale prices, seasonal and sectional trends and comparisons in amounts and prices.

GREATER USE OF NATIVE PRODUCTS

The division continued to encourage increased use of native products by various means. Lectures and radio talks were prepared and given, newspaper and magazine articles on such subjects as canning, fish in the diet, roadside markets, and individual native products were written and information for more articles given newspaper representatives. Also, a native season chart was arranged showing periods during which market supplies of local products are most liberal, quality best, and prices moderate. Mimeographed copies of the chart were distributed to familiarize consumers with the native fruit and vegetable seasons and to guide budget planners in taking complete advantage of the native seasons.

A brief study of canned milk business with relation to fresh milk with special reference to use of both by city welfare clients was made in Worcester at the request of the Worcester County Extension Service, prompted by the Worcester County dairymen.

COOPERATIVE RELATIONS

The division has enjoyed a continuance of pleasant cooperative relations with public agencies and with trade organizations.

Through cooperation with the United States Department of Agriculture radio market news has been broadcast daily over Station WBZ. This has provided timely information for producers, distributors, and consumers. The wide coverage provided by the radio service is very helpful in facilitating the distribution of farm products by keeping growers in close touch with market conditions and by keeping housewives informed as to the kinds and varieties of locally grown products available.

Crop reports, valuable sources of basic information, have been continued in cooperation with the New England Crop Reporting Service.

The work of the division with groups of farmers during the past year has further emphasized the value of joint action on the part of farmers. Such organized effort provides excellent opportunities for thorough discussion of mutual problems and makes possible a much more effective expression of opinion than can be secured through individual action.

FISH PROMOTION

The legislature passed a bill authorizing the department to carry on a program for the promotion and development of the commercial fishing industry.

This Department immediately took the opportunity of arranging an exhibit showing fish products and some of the picturesque gear used by our fishing boats. This display occupied a large space at a fair in Boston where many consumers became interested in the articles shown. Fine cooperation was given by the fishing industry in furnishing material.

Other work already started deals with information being given out to consumers, by radio and pamphlets, about the different varieties of fish available by season, and methods of preparing them for the table.

REPORT OF THE DIVISION OF PLANT PEST CONTROL

The Division of Plant Pest Control inspects stock growing in the nurseries of the State and all similar stock brought in from other States and imported from other countries. Clean plants and trees for fruit growing and landscape work are thus assured. The control of pests that may be injurious to agricultural crops while growing or in storage or in the manufactured form is facilitated thru advice and assistance given by this division. The division is also responsible for the enforcement of laws, regulations, and quarantines to prevent the spread of new and injurious crop pests. Field surveys and investigations are made by the personnel of the division for the purpose of controlling such pests as the Satin Moth; Oriental Moth, Japanese Beetle; European Corn Borer; Scale Insects; White Pine Blister Rust; Cedar Rust, etc. In the control of pests that have a national importance, because of the danger of spread to other States, the division actively cooperates with the Federal Government.

Prior to 1900 there were very few nurseries in the State, and these were small. At the present time, however, there are 339 which have been certified by this division, totaling over 3,000 acres of growing stock. Most of these nurseries are located in the more thickly populated eastern part of the State, but some large nurseries are in the central and western sections of the Commonwealth.

In addition to the certification of nurseries, the law requires that all persons engaged in selling nursery stock must be licensed. During the last fiscal year, the division issued licenses to 487 such agents.

The division keeps in close touch with all of the nurseries, inspecting them several times a year for different insects and plant diseases. This past season an inspection of the growing stock showed it to be apparently free from injurious pests. The property surrounding the nurseries was also given careful examination in order to make sure that pests would not enter the nurseries from this source. This inspection showed that this property was also apparently clean. The sales of nursery stock in Massachusetts amount to more than a million dollars a year, and while it is difficult to place the value of our inspections in dollars and cents, it is absolutely essential that stock sent out from the nurseries be absolutely clean; otherwise, it would not thrive and there would also be danger of spreading pests which might cause inconceivable damage. The nurseries must be kept up to the standards set by other States, or the business which is now here would be lost. The development of the nurseries also increases the value of land which might otherwise be unproductive. In this way a large revenue is brought into the treasury of the local communities.

EUROPEAN CORN BORER

The European Corn Borer which was first found in the vicinity of Boston in 1917, has gradually spread until at the present time most of New England is infested, as well as New York and some of the western States. Its ravages were so serious in Massachusetts ten years ago, that most of the market gardeners in the vicinity of Boston were obliged to give up the practice of growing sweet corn for market. The experiments that the Federal Government have carried on, demonstrate that a partial control can be obtained by plowing the corn fields before the cold weather sets in. In addition to controlling the corn borer, this is a good farm practice. In 1923 the Legislature passed an act requiring that corn stubble be either plowed or destroyed by December 1. This pest is still causing considerable damage, and if

the above practice were eliminated, there is little doubt but that it would be almost impossible to grow sweet corn in Massachusetts. Canada and several States that are not infested with this insect prohibit the importation of plant products from Massachusetts unless they are accompanied by a certificate of inspection. It is, therefore, necessary for this department to examine these plants and certify them.

JAPANESE BEETLE

The Japanese Beetle is another imported pest which is now firmly established in Massachusetts and is capable of doing considerable damage to all branches of agriculture. It is a serious pest to the fruit grower, farmer, and nurseryman. The adult which is a beetle, attacks both shade and fruit trees. A considerable part of this insect's life is passed within the ground as a grub, and in that stage feeds on the roots of trees and grasses. In this form, if the beetle population is heavy it may be injurious to golf courses and especially troublesome to nurserymen.

A careful inspection was made in the nurseries and the property surrounding them, to determine whether or not this insect was present. The findings were one beetle. However, this was not found on nursery stock. This pest has been found in all the New England States, and in order for nurserymen to make shipments of stock from the infested area to points outside or for farmers and florists to ship corn, beans, berries, or cut flowers, they must have the stock certified. At the present time this insect is causing very little damage in Massachusetts, but, if the degree of infestation increases, it is possible that injury to some crops and trees will be manifested. This pest, however, is easy to control; the adult by spraying with arsenate of lead, and as a grub by treating the soil either with arsenate of lead or carbon bisulphide.

WHITE PINE BLISTER RUST CONTROL

The Division continued to enlist the cooperation of property owners in protecting the white pine forests of the Commonwealth from further damage by the white pine blister rust. This fungous disease of white pine trees and Ribes (currant and gooseberry bushes) is now (November 30, 1933) known to have attacked white pines in 343 of the 355 cities and towns in the State, and continued vigilance will be needed for some time to come to keep the disease in check.

The attempt to continue so far as possible, the policy of securing the eradication of Ribes through the cooperation of local pine and Ribes owners was not an easy task during 1933. Economic conditions had depressed pine values and had also reduced the incomes of many owners to the point where expenditures for other than the necessities of life were not possible. However, 567 pine and Ribes owners were willing to cooperate and participated in the examination of 81,980 acres of land. From this area 252,611 wild Ribes were cleared and it was found necessary to destroy 2,820 cultivated Ribes.

Early in the field season, we were called upon to assist in the Emergency Conservation Work (E. C. W.) activities by the assignment of trained men to ten of the Civilian Conservation Corps (C. C. C.) camps in Massachusetts. Six experienced foremen were selected from our temporary personnel. At each camp, one or two crews of five men and a sub-foreman were selected from the enrolled personnel and then trained in control methods. Much might be recorded regarding this work, but suffice it to say that the work actually accomplished was well and thoroughly done. State Forest areas aggravating 11,807 acres were covered by these C.C.C. crews and 176,755 wild and 49 cultivated Ribes eliminated.

In August, funds were allocated to the U. S. Department of Agriculture from the appropriations provided by the National Industrial Recovery Act (N.R.A.) and a small appropriation was made available for blister rust control work in Massachusetts through this Division. Obviously, it was too late in the season to expect to accomplish very effective work due to the defoliation of Ribes. It was possible, however, to select areas where the Ribes were holding their leaves and very good results were obtained. In any event, the real need was to put men to work and this was accomplished in a minor way, in that we were able to give part-time employment to eighty-three previously unemployed laborers for a total of 7,258½ man-hours. Control work was performed on 3,320 acres of land and 124,407 wild Ribes destroyed.

In Barnstable, Essex, Middlesex and Worcester Counties, work of canvassing properties for the purpose of locating and eliminating plants of the European black currant was continued. It has been deemed necessary to eliminate these plants on a State-wide basis, because of their exceptional susceptibility to the rust. The owners of such plants have given the Division almost unanimous cooperation in this special control work. The canvass during the 1933 field season involved 58,666 inspections in 37 townships where black currants numbering 2,181 plants were found in 552 locations.

As a result of inspections made during the year, it is quite apparent that continued and more effective work is needed in maintaining suitable Ribes-free protection zones in the surroundings of those commercial nurseries in the State where white pines are being produced. In other words, funds have not been sufficient to adequately establish control conditions and increased efforts will be needed.

During the last week in November, the Division was called upon to prepare a plan for a blister rust control project under the Civil Works Administration (C.W.A.) an emergency activity created under the National Industrial Recovery Act. In spite of the fact that the winter is not the time of year when large numbers of men can be employed on blister rust control work, a three-fold project was prepared and approved and the first crews started work on November 27. This emergency work involved the elimination of diseased pine branches or entire trees where infected with a trunk canker, the mapping of prospective control areas, and the continuance of the canvass to locate specimens of European Black Currants. Details of this activity will be recorded in the report for the next fiscal year.

APIARY INSPECTION

Activities in apiary inspection have continued without change of policy, although they were somewhat restricted by the reduced appropriation. Five deputy inspectors were employed; one less than the previous year. These men carry out the field work, being assigned respectively to Berkshire County, the Connecticut Valley, Worcester and western Middlesex Counties, northern Middlesex and Essex Counties, and the counties south of Boston.

Thus the entire State is kept under observation, although the major part of the inspection has been conducted east and southeast of Worcester County. The end in view has been to gradually extend the areas now under control.

American foulbrood has been encountered principally. Being the more tenacious brood disease, sterner measures are required for its control, than those for European foulbrood, now seldom encountered. Wherever intensive inspection has been possible, improvement in apiary conditions is apparent. It is becoming increasingly obvious, however, that the time is close at hand, when it will be necessary to reinspect areas already brought under control, for the purpose of maintaining this control. Recurrences of disease and new foci, restricted at first, appear to be inevitable. It is of the utmost importance to be enabled to inspect and discover these at their inception, so as to prevent their extension in the already cleaned areas.

The demand for bees in orchard practice is maintained; perhaps it is even greater. There is a noticeable swing toward the use of colony bees, instead of package bees, although vast quantities of the latter are used, being shipped each May from apiaries in the south. The situation suggests a fortunate opportunity for the Massachusetts beekeeper to perfect means of supplying ample colony bees for Massachusetts fruit growers.

REPORT OF THE DIVISION OF RECLAMATION, SOIL SURVEY AND FAIRS

MASSACHUSETTS FAIRS IN 1933

The agricultural fairs in Massachusetts showed a marked improvement this year over last, both from an attendance and financial standpoint. Most fairs not only paid their operating expenses but also showed a small profit. This most satisfactory result was due to two reasons; first, a reduction in operating expenses and second, a small increase in receipts from gate and grandstand. Figures compiled on a State-wide basis indicate that receipts increased approximately 8 per cent in 1933 over 1932 while operating expenses were reduced approximately 10 per cent.

The managements of the agricultural fairs have shown an unusual ability in being able to put their houses in order, to lay out a budget based on the fairs' financial standing and then insisting that their department heads keep within the budget estimate.

The Department of Agriculture cooperated with 20 major, 43 community, 41 granges and 9 poultry and rabbit associations holding fairs and shows, making a total of 113 societies, associations and organizations receiving either an allotment of State prize money or special trophies, medals and ribbons. This number is slightly less than last year owing largely to business conditions in the localities where some of these fairs have previously been held.

IMPROVEMENT IN EXHIBITS CONTINUES

There has been a noticeable improvement during the last few years in the appearance and set-up of the agricultural halls and buildings in which the exhibits of fruits, vegetables, flowers, canned goods and home department are housed. More artistry has been displayed in arranging the exhibits and the quality of the products has been constantly improving. Exhibitors have improved in their ability to select, as well as to prepare, farm products for exhibiting. Another noticeable improvement has been in the arrangement of flowers in vases and other containers. Canned goods are much more attractively displayed and handiwork has improved both in quality and type.

SPECIAL EXHIBITIONS

The exhibits in the Massachusetts Building on the Brockton Fair grounds put on by the Department showed the work of five State Departments, namely, Department of Public Works, Department of Public Safety, Department of Mental Diseases, Department of Conservation (Division of Forestry and Fisheries and Game) and the Department of Agriculture. The exhibit showed in a most attractive and graphic manner many of the activities of these several departments and proved to be of great interest to the patrons of the fair.

In the Massachusetts Building on the Eastern States Exposition grounds, West Springfield, the exhibit took an entirely different line and showed the interdependence of agriculture and industry. Many of the leading industries of Massachusetts were represented in exhibit cases about the building and the products of the farms were shown in conjunction with the industrial exhibits. The whole exhibit was educational as well as artistically displayed and received very favorable comment.

In connection with the New England Prosperity Exposition and Home Makers Exhibit in Mechanics Building, Boston, the Department installed a very elaborate commercial fisheries exhibit in addition to an agricultural and industrial display covering 200 running feet of space.

The Union Agricultural Meeting was also managed, exhibits installed and premiums offered by the Department. Several smaller exhibits were set up during the year in connection with poultry shows and other organizations.

JUNIOR WORK OUTSTANDING

The interest in fairs on the part of boys and girls is still on the increase and the number of exhibits by young people was 5 per cent greater in 1933 than in the previous year. In this connection it is an interesting fact that boys' and girls' exhibits have made an annual gain for the past eight or ten years and that fairs are giving more space and attention to the junior departments each year. The educational features of the junior department cover a wide variety of activities and are included in practically every department of the fair. The result of this effort on the part of fairs to encourage young people is already beginning to show by the constantly increasing number of young people who are engaged in 4-H club work, vocational work and other young people's activities.

PRIZE MONEY ALLOTMENTS

Applications for an allotment of agricultural prize money were received from 109 organizations and premiums were paid direct to exhibitors at 96 of this number. The amount of the allotments made varied from a minimum of \$15 to a maximum of \$1,800 and the distribution was made to 18 major fairs, 31 community fairs, 7 poultry and rabbit associations and 37 grange fairs. The exhibits in the Massachusetts Buildings at Brockton and Springfield were paid for out of prize money as were also the 4-H Club Camp at Amherst, all special exhibitions, trophies, ribbons

and medals, and the premiums in the fruit show held at Worcester in connection with the Union Agricultural Meeting and all other special awards made during the year.

18 Agricultural and Horticultural Societies
(Brockton and Eastern States not included)

Acton Agricultural Association, \$671; Blackstone Valley Agricultural Society, \$494; Bristol County Young Farmers' Fair, \$450; Deerfield Valley Agricultural Society, \$689.75; Essex Agricultural Society, \$1,800.10; Franklin County Agricultural Society, \$1,800; Groton Farmers' and Mechanics' Club, \$600; Hampshire, Franklin, and Hampden Agricultural Society, \$1,799.50; Highland Agricultural Society, \$950; Hillside Agricultural Society, \$1,000; Housatonic Agricultural Society, \$1,264.55; Littleville Community Fair, \$400; Marshfield Agricultural and Horticultural Society, \$850; Martha's Vineyard Agricultural Society, \$500; Nantucket Agricultural Society, \$201; Plymouth County Agricultural Society, \$650; Sturbridge Agricultural Association, \$700; Union Agricultural Society, \$750; total, \$15,569.90.

31 Community Fairs and Local Exhibitions

Ashby Community Fair, \$69.75; Barre Junior Fair, \$193; Bolton Farmers' and Mechanics Club, \$50; Cape Cod Horticultural Society, \$100; Chester Junior Fair, \$35.75; Chicopee Junior Exhibit, \$15; Connecticut Valley Onion Show, \$110.50; Connecticut Valley Potato Show, \$80.50; Dalton Community Fair, \$16; East Longmeadow Community Fair Association, \$61; East Bridgewater Community Fair, \$75; Granville Community Fair, \$75; Hampden County Improvement League, \$115; Heath Agricultural Society, \$175; Hingham Agricultural and Horticultural Society, \$100; Montgomery Junior Fair, \$15.50; Natick Community Fair, \$50; Norfolk County Junior Fair, \$49.75; Orange Boys' and Girls' Club, \$75; Southwick Community Fair, \$61.50; South Amherst Fruit Show, \$100; Sterling Farmers Club, \$125; Union Agricultural Meeting Fruit Show, \$175; Union Agricultural Meeting Potato Show, \$18; Upton Farmers' Club, \$100; Westborough Woman's Club, \$15; Wales Community Fair, \$19.80; Westfield Young People's Agricultural Society, \$50; White Oaks Community Fair, \$25; Winthrop Garden Club, \$15; total, \$2,166.05.

37 Subordinate Grange Exhibits

Abington, \$13; Acushnet, \$15; Ashburnham, \$15; Bedford, \$25; Brimfield, \$18.50; Chatham, \$15; Dedham, \$19.50; Dunstable, \$50; Fairhaven, \$9; Hilltop, \$5.25; Holden, \$13; Leicester, \$15; Ludlow, \$30; Mansfield, \$34.50; Merrimac, \$23; Milford, \$15; Nemasket, \$15.25; New Salem, \$13; Norfolk Pomona, \$9; North Seekonk, \$15; Oak Hill, \$14.20; Palmer, \$15; Pittsfield, \$15; Randolph, \$25; Richmond, \$15; Rockland, \$4.50; Rochester, \$15; Rutland, \$15; Swansea, \$15; South Middleborough, \$15; Thrifty, \$27.50; Upton, \$15; Waltham, \$15; Warren, \$35; Westford, \$20; Weston, \$15; West Stockbridge, \$24; total, \$668.20.

7 Poultry and Rabbit Associations

Athol Poultry and Pet Stock Association, \$162; Boston Poultry Show, Inc., \$296; Essex County Poultry Association, \$50; Essex County Rabbit Breeders' Association, \$70; Fitchburg Poultry Fanciers' Association, \$199.50; Metropolitan Reading Poultry Association, \$150; New England Poultry Association, Inc., \$250; total, \$1,177.50.

SUMMARY OF STATE PRIZE MONEY

Agricultural and Horticultural Societies	\$15,569.90
Community Fairs and Local Exhibitions	2,166.05
Poultry and Rabbit Associations	1,177.50
Subordinate Granges	668.20
Junior Activities	1,800.00
Badges, medals, cups, etc.	1,067.39
Special Exhibitions	6,978.76
Miscellaneous expenses	825.93

\$30,253.73

REPORT OF THE STATE RECLAMATION BOARD

During the fiscal year 1933, the Commonwealth of Massachusetts continued the policy in force during 1931 and 1932, namely that of appropriating money for mosquito control work under the State Reclamation Board as a means of emergency relief for unemployment. It had been very clearly demonstrated in 1931 and 1932 that in mosquito control work over 91 per cent of the money went direct to labor, and that the work was accomplishing real results. During the fiscal year, the state appropriated, in all, \$100,000 for relief work on this mosquito control:—\$75,000 in Chapter 89 of 1933, and an additional \$25,000 in the supplementary budget, Chapter 371, Item 241-b. This, with appropriations made in previous years, brought the state total for mosquito control work to \$600,000.

Of this \$100,000 appropriated in 1933, allotments were made to the various state projects; namely, Bristol-South Plymouth, South Shore, North Shore, Martha's Vineyard, Nantucket and Mashpee, and a small allotment was made for a new project in the Town of Wenham, to which the state allotted \$750 on the appropriation of a like amount on the part of the town. In these several projects, work was carried on as formerly, continuing the ditching of breeding places almost entirely on salt marsh areas. In the Bristol-South Plymouth, Nantucket, and Martha's Vineyard areas, some work was carried forward during the winter months, and even on the areas north of Boston, it was found possible to do some work in the way of removal of sods on areas where salt hay was harvested.

The total expenditures for construction work on State projects during the fiscal year 1933 was \$104,677.86. In addition to these expenditures, there was spent in 1933, from funds appropriated and sent in by towns assessed for maintenance work in accordance with Chapter 112 of 1931, the sum of \$22,361.63. In 1933 there were employed in mosquito control work over 1,140 citizens of the Commonwealth, all of whom were taken from the ranks of the unemployed.

The budget for administrative work of the Board called for \$9,140 which was increased by \$2,000 in the supplementary budget, making the total for the year \$11,140, which covered services of permanent and part-time employees of the Board, as well as necessary expenses incurred in planning and supervising work for the various mosquito control projects in operation during the year. At the close of fiscal year 1933, the investment in mosquito control work, including that performed under state appropriations as well as local appropriations and contributed funds, totaled \$898,288, all spent since April 1, 1930. The supervision of the maintenance of 2,900 miles of ditches is in itself no slight undertaking.

Gratifying reports of the success attending efforts on mosquito control work continued to come in unsolicited from both organizations and individuals. These reports give evidence of the effectiveness of ditching and draining breeding places on salt marsh areas of the state.

Of the various reclamation and drainage districts organized in previous years by the State Reclamation Board, the Belle Isle Reclamation District did certain construction work in the way of further ditching and filling. There were also several questions that arose in other districts where construction work has come to a halt.

FINANCIAL STATEMENTS

Appended are tables of the allotments and expenditures for the various state and private projects on mosquito control, and also tables showing the assessments made for maintenance work in the different projects for the year 1933.

Allotment of Funds from Appropriations of 1931-1932-1933

1. \$270,000—Chapter 112, Acts of 1931
2. 100,000—Chapter 465, Acts of 1931
3. 130,000—Chapter 307, Item 245-b, Acts of 1932
4. 75,000—Chapter 89, Acts of 1933
5. 25,000—Chapter 371, Item 241-b, Acts of 1933
6. 22,767—Local Appropriations and Contributions

Project	1.	2.	3.	4.	5.	6.	Total
Bristol-South Plymouth	\$90,000	\$25,000	\$4,500	\$5,000	\$450	\$3,350	\$128,300
South Shore	70,000	40,000	57,500	17,000	7,500	18,450	210,450
North Shore	90,000	5,000	23,000	41,000	12,000	150	171,150
South Essex	20,000	30,000	30,000	—	—	—	80,000
Mashpee	—	—	5,000	3,000	—	—	8,000
Martha's Vineyard	—	—	5,000	5,250	825	67	11,142
Nantucket	—	—	5,000	3,000	—	—	8,000
Wenham	—	—	—	750	—	750	1,500
Unallotted Funds	—	—	—	—	4,225	—	4,225
Total	\$270,000	\$100,000	\$130,000	\$75,000	\$25,000	\$22,767	\$622,767

*Expenditures—Mosquito Control—State Projects
(not including maintenance)*

Project	Previous to 1933	Fiscal Year 1933	Total
Bristol-South Plymouth	\$120,420.30	\$7,845.55	\$128,265.85
South Shore	185,551.55	24,843.34	210,394.89
North Shore (including South Essex)	195,456.03	55,639.78	251,095.81
Mashpee	4,795.32	3,202.62	7,997.94
Nantucket State	3,911.98	4,015.00	7,926.98
Martha's Vineyard	3,474.98	7,642.03	11,117.01
Wenham	—	1,489.54	1,489.54
Total	\$513,610.16	\$104,677.86	\$618,288.02

Maintenance of State Projects—1933

Project	Total Assess. for 1933
Bristol-South Plymouth	\$7,495.00
South Shore	11,800.00
North Shore (formerly South Essex)	6,165.00
Nantucket State	400.00
Martha's Vineyard	400.00
Total	\$26,260.00

Expenditures—Mosquito Control—Other Than State Projects

Project	Previous to 1933	Fiscal Year 1933	Total
Cape Cod	\$192,606.05	\$32,275.17	\$224,881.22
Nantucket	28,083.99	1,834.15	29,918.14
Belmont-Cambridge-Watertown	3,740.00	913.79	4,653.79
Natick	458.17	88.72	546.89
Total	\$224,888.21	\$35,111.83	\$260,000.04

Summary of Expenditures

Totals	Previous to 1933	Fiscal Year 1933	Total
Other than State Projects	\$224,888.21	\$35,111.83	\$260,000.04
State Projects	513,610.16	104,677.86	618,288.02
Grand Total	\$738,498.37	\$139,789.69	\$878,288.06

To the total should be added the amount spent under Chapter 426, Item 708a, of the Acts of 1930, for the construction of dike on the Province Lands, owned by the Commonwealth at Provincetown 20,000.00

Grand Total \$898,288.06

